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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,526	01/12/2004	Takeshi Aoyagi	00862.023398.	8247
5514 7590 05/16/2007 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER WOLDEMARIAM, AKILILU K	
			ART UNIT 2609	PAPER NUMBER
			MAIL DATE 05/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/754,526

Applicant(s)

AOYAGI, TAKESHI

Examiner

Aklilu k. Woldemariam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 01 March 2004; 09 March 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 1 March 2004 was filed after the mailing date of the same day on 1 March 2004. The second information disclosure statement (IDS) submitted on 9 March 2004 was filed after the mailing date on 8 March 2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1,4,7,9,11 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura et al., hereinafter Shimomura (U.S Patent number 6,427,025B1) in view of Ito et al., thereafter Ito (U.S. Publication number 2003/0086127A1).

Regarding claims 1 and 4, Shimomura et al. discloses an image processing apparatus and an image processing method comprising a compression unit which compresses image data (column 11, lines 59-60 & column 12, lines 21-22); a data amount calculation unit which obtains a data amount of the image data compressed by the compression unit (column 16, lines 7-9 & 38-40, Fig. 7); a determination unit which

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determines whether the data amount calculated by the data amount calculation unit exceeds a capacity of a memory (column 25, lines 6-8 & column 16, lines 10-15);

A control unit (column 12, lines 38) which performs control to increase a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit, make the compression unit compress the image data, and store the image data in the memory (column 12, lines 41-42); a counting unit which counts the number of times (column 13, lines 63-67 & column 18, lines 16-17); the determination unit determined that the data amount exceeded the capacity of the memory (column 25, lines 6-8); a holding unit which holds the counted number of times (column 16, lines 38-40 & Fig. 57); and a decoding unit which decodes the data stored in the memory (column 28, lines 67-68) on the basis of the number of times held by the holding unit.

Shimomura et al. does not disclose that a control unit to increase's compression ratio.

However Ito et al. discloses that a control unit to increase's Compression ratio of the determination unit (column 1 paragraph [006] & column 16 paragraph [0283]).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Ito's increase compression ratio in Shimomura's control unit to increase's a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit in order to minimize the memory size, [Ito's (column 1 paragraph [0012] & column 16 paragraph [0283])].

Regarding claims 7 and 9, Shimomura et al. discloses an image processing apparatus comprising a compression unit which compresses image data (column 11, lines 59-60 & column 12, lines 21-22, Fig.1); a data amount calculation unit which obtains a data amount of the image data compressed by the compression unit (column 16, lines 7-9 & lines 38-40, Fig.7); a determination unit which determines whether the data amount calculated by the data amount calculation unit exceeds a capacity of a memory (column 25, lines 6-8 & column 16, lines 10-15) a control unit (column 12, line 38) which performs control to increase a compression ratio of the compression unit in accordance with a determination result obtained by said determination unit, make said compression unit compress the image data, and store the image data in the memory (column 12, lines 41-42);

a counting unit which counts the number of times (column 13, lines 63-67 & column 18, lines 16-17) said determination unit determined that the data amount exceeded the capacity of the memory (column 25 lines 6-8); and a holding unit (column 16, lines 38-40 Fig.57) which holds the counted number of times; to decode the data stored in the memory.

Shimomura et al. does not disclose that a control unit to increase's compression ratio.

However Ito et al. discloses that a control unit to increase's compression ratio of the determination unit (column 1 paragraph [006] & column 16 paragraph [0283]).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Ito's increase compression ratio in Shimomura's control unit to increase's a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit in order to minimize the memory size, [Ito's (column 1 paragraph [0012] & column 16 paragraph [0283])].

Regarding to claims 11 and 13, Shimomura discloses an image processing apparatus, which, on a coding side for image data, obtains a data amount of compressed image data (column 11, lines 59-60 & column 12, lines 21-22), determines whether the obtained data amount exceeds a capacity of a memory (column 25, lines 6-8 & column 16, lines 10-15) increases a compression ratio in the compression in accordance with the determination, compresses the image data, and decodes the compressed image data stored in the memory (column 12, lines 41-42), Comprising a holding unit which holds the number of times it was determined that the data amount exceeded the capacity of the memory in coding operation on the coding side (column 18 lines 63-64 Fig.6); and a decoding unit which decodes the data stored in the memory (column 27 lines 15-19) in accordance with the number of times stored in said holding unit.

Shimomura et al. does not disclose that a control unit to increase's compression ratio.

However Ito et al. discloses that a control unit to increase's compression ratio (column 1, paragraph [006] and column 16, paragraph [0283]).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Ito's increase compression ratio in Shimomura's control unit to increase's a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit in order to minimize the memory size, [Ito's (column 1 paragraph [0012] & column 16 paragraph [0283])].

4. Claims 2, 3, 5, 6, 8, 10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura in view of Ito and further in view of Honma et al., "Honma" (U.S. Patent number 6,198,848B1).

Regarding claims 2 and 5, Shimomura and Ito disclose the apparatus according to claim 1 and the method according to claim 4, wherein the compression unit comprises an orthogonal transform unit, which orthogonally transforms image data a quantization unit which quantizes coefficients - orthogonally transformed by the orthogonal transform unit in accordance with a quantization table, a shift unit which shifts the coefficients quantized by the quantization unit to change the compression ratio and a coding unit which codes the coefficients shifted by the shift unit (column 13, paragraph [0231]).

Shimomura and Ito do not disclose the compression unit comprises an orthogonal transform unit which orthogonally transforms image data a quantization unit which quantizes coefficients - orthogonally transformed by said orthogonal transform unit in accordance with a quantization table.

However Honma discloses the compression unit comprises an orthogonal transform unit, which orthogonally transforms image data (column 3, lines 14-15) a quantization

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unit, which quantizes coefficients - orthogonally transformed by the orthogonal transform unit (column 3 lines 32-41) in accordance with a quantization table (column 4, lines 44-47).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Honma's orthogonal transformation unit in to [Shimomura and Ito] compression unit in order to quantize the image data, [Honma, (column 5, lines 60-64)].

Regarding claims 3 and 6, Shimomura and Ito discloses the apparatus according to claim 2 and the method according to claim 5, wherein the decoding unit (column 27 lines 15-19) performs decoding upon setting a quantization table corresponding to the held number of times (column 16, lines 38-40 Fig.57), and Honma discloses a quantization table (column 4, lines 44-47).

Regarding claims 8 and 10, Shimomura and Ito disclose the apparatus according to claim 7 and the method according to claim 9, wherein the holding unit holds the number of times (column 16, lines 38-40, Fig. 57) to determine a quantization table to be used to decode the data stored in the memory.

Shimomura and Ito do not disclose the determining a quantization table to be used to decode the data stored in the memory.

However, Honma discloses the determining a quantization table to be used to decode the data stored in the memory (column 4, lines 44-47):

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Honma's quantization table in to [Shimomura and

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Ito] compression unit in order to compress image to desired size, [Honma, (column 4, lines 40-41].

Regarding claims 12 and 14, Shimomura and Ito disclose that the apparatus according to claim 11, & the method according to claim 13, wherein said holding unit holds the number of times (column 16, lines 38-40 & Fig.57) to determine a quantization table to be used to decode the data stored in the memory (column 27 lines 15-18).

Shimomura and Ito do not disclose the determining a quantization table to be used to decode the data stored in the memory.

However, Honma discloses the determining a quantization table to be used to decode the data stored in the memory (column 4, lines 44-47).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Honma's quantization table in to [Shimomura and Ito] compression unit in order to compress image to desired size, [Honma, (column 4, lines 40-41].

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yoshimari (U.S. Patent number 5,513,279) discloses reduce the capacity of memory means for expanding compressed data and reduce the size of the unit of coding and decoding processing. Sugahara (U.S. Patent number 5,949,908) discloses decoding the coded image data into blocks. Ohki (U.S. Patent number 5,757,965) discloses compresses the input image data.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aklilu k. Woldemariam whose telephone number is 571-270-3247. The examiner can normally be reached on Monday-Thursday 6:30 a.m-5:00 p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alexander Eisen
SPE
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A.W.